

Key

January: 1-42

February: 43-88

March: 89-125

April: 126-167

May: 168-221

October: 222-286

November: 287-342

December: 343-403

Topical Index**Cross Curriculum**

Instructional Practice	137
Using Inquiry	49
Classroom Blogging	173

Math

Gender Perception	149
Gender Difference	113
Reading and Writing	8
Perception of Discourse	58
Number Representation	238
Unit Concept	20
Classroom Test	251
Word Problem	184
Students Belief	326
Emerging Discipline	355
Low-Achieving Students	362
Algebra Problem Solving	380
Functional Model	278

Science

Conceptions of Illness	263
Coherence of Teaching	103
Perception of Engineering	197
Inquiry Instrument	291
Mind Mapping	299

High School

Observation of Student	28
------------------------	----

Pre-Service

Service Learning	94
Elementary Math Knowledge	120
Functional Model	228
Manipulatives Using	313
Pre-service Teachers' Reaction	345

Author Index

Issam Abi-El-Mona	298	Xiaobao Li	4
Fouad Adb-El-Khalick	298	Yeping Li	4, 90, 169
Tufan Adiguzel	127, 225	Jen Lyons	197
Dani Ben-Zvi	355	Robyn Macbride	173
Michael J. Bosse	8	Christine Marroquin	279
Brian T. Boyd	251	Dianne S. McCarthy	334
Susan M. Butler	71	Bryan Moseley	238
Barbara Boschmans	345	Christine Moseley	49
Erdine Cakiroglu	113	Henry W. Neale, Jr.	326
Robert M. Capraro	80	Barbara O'Donnell	313
Glenda Carter	71	Todd Oberg	345
Xi Chen	90	Yukari Okamoto	238
Michelle Cook	71	Irene U. Osisoma	389
Jon D. Davis	380	Charlotte A. Otto	278
Thomas C. DeFranco	58	Serkan Ozel	80
Francis Eberle	103	John C. Park	71
Kellah Edens	184	Diana Piccolo	46
N. Kathryn Essex	169	Ann G. Ponniah	169
Susan A. Everett	278	Ellen Potter	184
Johna Faulconer	8	Laurel Puchner	313
Kathleen Fick	313	David K. Pugalee	326
John Ford	362	Sarah Ramsey	49
Joan Garfield	355	Melissa J. Rua	263
Hope Gerson	28	John A. Ross	362
Peter L. Glidden	130	Amélie G. Schinck	326
Nicholas Gorgievski	58	Lori A. Smolleck	291
Tracy Goodson-Espy	289	Hortensia Soto-Johnson	345
April Hoffmeister	345	Paola Sztajn	20
Douglas Huffman	137	Janet (Hagemeyer) Tassell	169
Mary Ann Huntley	380	Ann Taylor	313
Michele Iiams	345	Kelli Thomas	137
Mine Isiksal	113	Stephen Thompson	197
M. Gail Jones	263	Mary P. Truxaw	58
mutindi mumbua kiluva-ndunda	389	Meta Van Sickle	389
Lisa Kirtman	94	Kimberley J. Vannest	127
Peter Kloosterman	169	Eric N. Wiebe	71
Frances Lawrenz	137	YunMei Xu	362
Hyung Sook Lee	20	Zeynep Ebrar Yetkiner	80
April Lynn Luehmann	173	Edgar P. Yoder	291
Gail R. Luera	278	Elaine Young	279

Title Index

Page	Title
8	<i>Learning and Assessing Mathematics through Reading and Writing</i>
20	<i>Focusing on Units to Support Prospective Elementary Teachers' Understanding of Division in Fractional Contexts</i>
28	<i>David's Understanding of Functions and Periodicity</i>
49	<i>Elementary Teachers' Progressive Understanding of Inquiry through the Process of Reflection</i>
58	<i>Measuring K-8 Teachers' Perceptions of Discourse Use in Their Mathematics Classes</i>
71	<i>Middle Grade Students' Interpretations of Contour Maps</i>
94	<i>Pre-Service Teachers and Mathematics: The Impact of Service-Learning on Teacher Preparation</i>
103	<i>Teaching and Coherent Science: An Investigation of Teachers' Beliefs about and Practice of Teaching Science Correctly</i>
113	<i>Gender Differences Regarding Mathematics Achievement: The Case of Turkish Middle School Students</i>
130	<i>Prospective Elementary Teachers' Understanding of Order of Operations</i>
137	<i>Science and Mathematics Instruction in Reform-Based Teacher Preparation Program</i>
169	<i>Perceptions of Mathematics and Gender</i>
173	<i>Capitalizing on Emerging Technologies: A Case Study of Classroom Blogging</i>
184	<i>How Students "Unpack" the Structure of a Word Problem: Graphic Representations and Problem Solving</i>
197	<i>Engineers in the Classroom: Their Influence on African-American Students' Perceptions of Engineering</i>
228	<i>Using a Functional Model to Develop a Mathematical Formula</i>
238	<i>Identifying Fourth Graders' Understanding of Rational Number Representations: A Mixed Methods Approach</i>
251	<i>Effects of State Tests on Classroom Test Items in Mathematics</i>
263	<i>Conceptual Representations of Flu and Microbial Illness Held by Students, Teachers, and Medical Professionals</i>
291	<i>Further Development and Validation of the Teaching Science as Inquiry (TSI) Instrument</i>
298	<i>The Influence of Mind Mapping on Eighth Graders' Science Achievement</i>
313	<i>Teacher Learning Mathematics Manipulatives: A Collective Case Study about Teacher Use of Manipulatives in Elementary and Middle School Mathematics Lessons</i>
326	<i>Using Metaphors to Unpack Student Beliefs about Mathematics</i>
345	<i>Promoting Pre-service Elementary Teachers' Awareness of Learning and Teaching Mathematics Conceptually through KTEM</i>
355	<i>Introducing the Emerging Discipline of Statistics Education</i>
362	<i>The Effects of a Teacher In-Service on Low-Achieving Grade 7 and 8 Mathematics Students</i>
380	<i>High-School Students' Approaches to Solving Algebra Problems that are Posed Symbolically: Results from an Interview Study</i>

Regular Features

Editorials: Gerald Kulm

- | | |
|-----|--|
| 2 | <i>Teachers' Mathematics Knowledge</i> |
| 224 | <i>Transition to Online Manuscript Submission and Review</i> |

Guest Editorials

- | | |
|-----|--|
| 44 | <i>The Veritable Quandary of Teacher Content Knowledge</i> , Carole Basile and Doris Kimbrough |
| 289 | <i>Running Against the Wind</i> , Tracy Goodson-Espy |

Problems: Ted Eisenberg

- | Page | Problem Number |
|------|--------------------|
| 41 | Problems 4996–5001 |
| 88 | Problems 5002–5006 |
| 124 | Problems 5008–5013 |
| 166 | Problems 5014–5019 |
| 214 | Problems 5020–5023 |
| 286 | Problems 5029–5031 |
| 342 | Problems 5032–5037 |
| 402 | Problems 5038–5043 |

Research in Brief

- | Page | Title |
|------|---|
| 4 | <i>Research on Students' Misconceptions to Improve Teaching and Learning in School Mathematics and Science</i> , Xiaobao Li and Yeping Li |
| 46 | <i>Views of Content and Pedagogical Knowledges for Teaching Mathematics</i> , Diana Piccolo |
| 90 | <i>Language Proficiency and Mathematics Learning</i> , Xi Chen and Yeping Li |
| 127 | <i>Web-Based Formative Assessment as Evidence-Based Practice in Science Instruction</i> , Tufan Adiguzel and Kimberley J. Vannest |
| 169 | <i>Mathematical Preparation of Elementary School Teachers: Generalists versus Content Specialists</i> , Yeping Li |
| 225 | <i>Advantages of Using Handheld Computers Against Other Methodologies for Data Collection</i> , Tufan Adiguzel |

Research in the Classroom

- | Page | Title |
|------|--|
| 279 | <i>Mathematics on the Playground</i> , Elaine Young and Christine Marroquin |
| 334 | <i>Communication in Mathematics: Preparing Preservice Teachers to Include Writing in Mathematics Teaching and Learning</i> , Dianne S. McCarthy |
| 389 | <i>Behind the Masks: Identifying Students' Competencies for Learning Mathematics and Science in Urban Settings</i> , Irene U. Osisoma, mutindi mumbua kiluva-ndunda, Meta Van Sickle |

Book Reviews: S. Wali Abdi, Section Editor

- | Page | Title |
|------|--|
| 39 | <i>The Prime Number Theorem</i> , reviewed by Medhat H. Rahim; <i>Creating a Classroom of Young Scientists (Second Edition)</i> , reviewed by John Eichinger |
| 86 | <i>Understanding Mathematics and Science Matters</i> , reviewed by Juliana Utley; <i>The Discoveries: Great Breakthroughs in 20th Century Science</i> , reviewed by Robert J. Whitaker |
| 121 | <i>How the Other Half Thinks: Adventures in Mathematical Reasoning</i> , reviewed by Daniel J. Schneck; <i>The Chemical Elements</i> , reviewed by Dorothy L. Gabel |

- 163 *Experimental Researches in Electricity*, reviewed by John Whitmer; *Topics in Graph Automorphisms and Reconstruction*, reviewed by Medhat H. Rahim; *Basic Concepts of Mathematics and Logic*, reviewed by Daniel J. Schneck
- 212 *Science Safety in the Community College*, reviewed by Lloyd H. Barrow; *Basic Concepts of Mathematics and Logic*, reviewed by Daniel J. Schneck
- 284 *Fantasy Baseball and Mathematics: A Resource Guide for Teachers and Parents*, reviewed by Carl Miller
- 341 *Uno's Garden*, reviewed by John Eichinger
- 401 *Awesome Experiments in Electricity and Magnetism; Weather Mania; and How Bright is Your Brain*; all reviewed by Michael A. DiSpezio

Short Report

Page	Title
80	<i>Technology in K-12 Mathematics Classrooms</i> , Serkan Ozel, Zeynep Ebrar Yetkiner, and Robert M. Capraro